

<!--StartFragment-->RESULT 2

AAU78434

ID AAU78434 standard; peptide; 7 AA.

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AC AAU78434;

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DT 15-JUN-2007 (revised)

DT 18-JUN-2002 (first entry)

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DE Inhibitor of apoptosis (IAP) protein Smac, mutant Smac-N7.

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KW Human; inhibitor of apoptosis; IAP; Smac; apoptosis; BID; BIR1; BIR2;

KW Bcl2 interacting domain; caspase; BIR domain; BIR3; gene therapy;

KW neoplastic cell; mutant; tumour.

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OS Homo sapiens.

OS Synthetic.

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PN WO200216418-A2.

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PD 28-FEB-2002.

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PF 24-AUG-2001; 2001WO-US026492.

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PR 24-AUG-2000; 2000US-0227735P.

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PA (UYJE-) UNIV JEFFERSON THOMAS.

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PI Alnemri ES;

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DR WPI; 2002-304115/34.

DR PC:NCBI; gi56554425.

DR PC:BIND; 303866.

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PT Novel Smac peptides and polynucleotides encoding the peptides, useful for

PT stimulating apoptosis in neoplastic or tumor cell which overexpresses

PT inhibitor of caspase, and for identifying apoptosis modulating compounds.

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PS Example 3; Fig 7; 78pp; English.

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CC The invention relates to an isolated Smac peptide or polypeptide (I) and
CC an isolated nucleic acid (II) encoding (I). Also described is a method of
CC identifying a compound that inhibits apoptosis, comprising: (a)

CC separately contacting several cell populations expressing a cytosolic

CC Smac (a Smac isoform that begins with MKSDFYF sequence, replacing the

CC mitochondrial targeting sequence (residues 1-55 of (I)), and residues 56-

CC 60 of (I)) and an inhibitor of BID (Bcl2 interacting domain) with a

CC compound to be tested for apoptotic inhibiting activity; (b) incubating

CC the cell populations with a direct stimulus of the cell death pathway;

CC and (c) measuring the specific apoptotic activity of the cell

CC populations, where inhibition of the specific apoptotic activity is

CC indicative that the compound is an inhibitor of apoptosis. (I) and (II)

CC are useful for inducing apoptosis in a cell. The Smac polypeptide and

CC polynucleotide are useful for stimulating apoptosis in a neoplastic or

CC tumour cell which overexpresses an inhibitor of caspase, where the

CC inhibitor inhibits activation or activity of caspase-3, caspase-7 or

CC caspase-9. Preferably, the cell overexpresses at least a portion of IAP.

CC (I) is useful for identifying an inhibitor or enhancer of a caspase-

CC mediated apoptosis which involves contacting a cell transformed or

CC transfected with a vector expressing (I) with a candidate inhibitor or

CC candidate enhancer; and detecting cell viability, where an increase in

CC cell viability indicates the presence of an inhibitor and a decrease in
CC cell viability indicates the presence of an enhancer. Optionally, the
CC method involves detecting the presence of large and small caspase
CC subunits after contacting cell transformed with the vector expressing
CC (I), with the candidate compound. A decrease in processing indicates the
CC presence of an inhibitor and an increase in the processing indicates the
CC presence of an enhancer. Preferably, the large and small subunits of
CC caspase-3, caspase-7 or caspase-9 are detected. (I) is also useful for
CC identifying a compound that inhibits Smac binding to Smac-binding
CC molecule (a portion of IAP e.g. a BIR domain such as BIR1, BIR2 or BIR3,
CC or a full-length IAP). (II) is useful in gene therapy techniques. The
CC present sequence represents the amino acid sequence of Smac mutant Smac-
CC N7

CC Revised record issued on 15-JUN-2007 : Enhanced with precomputed
CC information from BOND.

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SQ Sequence 7 AA;

Query Match 100.0%; Score 33; DB 5; Length 7;
Best Local Similarity 100.0%; Pred. No. 2.9e+06;
Matches 7; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AVPIAQK 7

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Db 1 AVPIAQK 7

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